

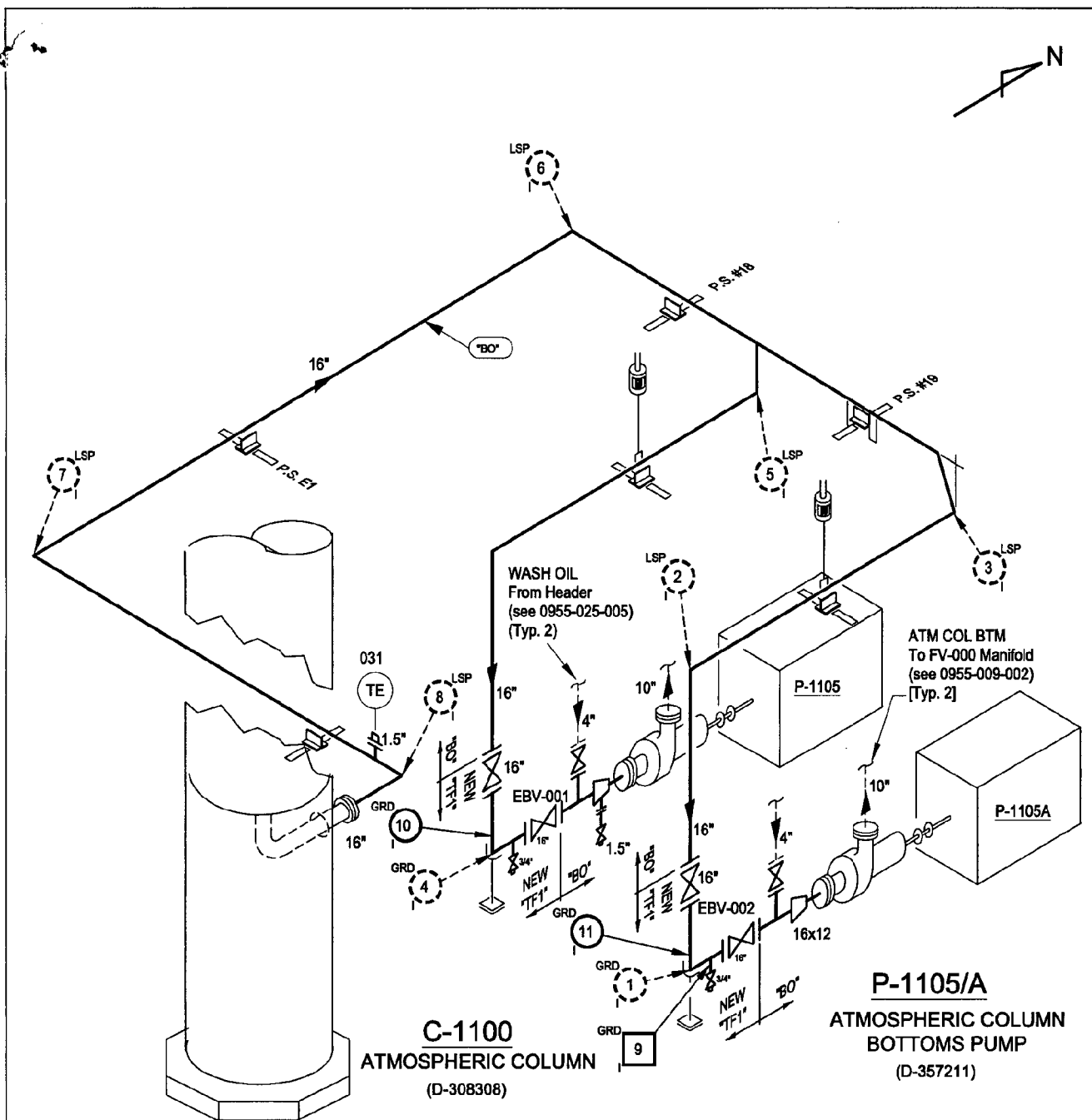
Corrosion Report



Equipment Location ID 0955-009-001
Equip. Location Descrip. C-1100 OUTLET- BOTTOMS TO P-1105/A

Remaining Life (Years) 46.29
Retirement Date 02/18/2058
Last Inspection Date 11/05/2011
Next Inspection Date 11/04/2021
Current Corrosion Rate 3.98

DP ID	MEAS METH	DP STAT	DP SZ	DT TYPE	BASE	MEAS 5	MEAS 4	MEAS 3	NEAR	LAST	MIN VALUE	CCR	REM LIFE
009.R	RT	A	0.75	NIP	0.210 12/02					0.210 11/11	0.100	0.00	∞
010.E	UT	A	16.00	PIPE	0.475 10/02					0.470 11/11	0.296	0.55	315.22
010.N	UT	A	16.00	PIPE	0.516 10/02					0.480 11/11	0.296	3.98	46.29
010.S	UT	A	16.00	PIPE	0.479 10/02					0.480 11/11	0.296	0.00	∞
010.W	UT	A	16.00	PIPE	0.472 10/02					0.480 11/11	0.296	0.00	∞
011.E	UT	A	16.00	PIPE	0.497 10/02					0.490 11/11	0.296	0.77	250.97
011.N	UT	A	16.00	PIPE	0.503 10/02					0.490 11/11	0.296	1.44	135.19
011.S	UT	A	16.00	PIPE	0.502 10/02					0.490 11/11	0.296	1.33	146.42
011.W	UT	A	16.00	PIPE	0.496 10/02					0.490 11/11	0.296	0.66	293.05



C-1100 BOTTOMS

**THIS IS A HOT CIRCUIT.
GAGE ON SHUTDOWN ONLY.**

REVISION

5	UPDATED REF. P&ID NO. D-357211 (WAS D-308308) PER CRUDE UNIT RECOVERY EFFORT (CURE)		LUZL	BJBL
	05-16-07		TVPA	

STATUS: ISO570 COMPLETE

MATERIAL: 5 CR
SERVICE: ATM COL BTMS
PIPE CLASS: TF1'(BO)
PWHT: YES

RATING?
☐ 150# ☒ 300#
STM TRACED? ☒
INSULATED? ☒
API-570
☐ CLASS I
☒ CLASS II
☐ CLASS III

04/06/2011
TTMW

INSPECTION PIPING ISOMETRIC

#9 ATMOSPHERIC COLUMN BOTTOMS

#4 CRUDE UNIT (PLANT 11)

DISTILLATION AND REFORMING AREA BUSINESS UNIT

LINE NAME: C-1100 BOTTOMS

FROM: C-1100

TO: P-1105/A

Z

0955-009-001

REV	SHT
5	1



History Brief

For Location ID: 0955-009-001 in Unit: 0955

Report Date: August 15, 2012

Data Source: Meridium

Brief Data:

Date Not Available:	1/15/2007	Date Available:	01/15/2007
History Brief Date:	02/26/2007	History Brief ID:	VI-0702169679
Event Type:	Inspection	In- Service Date:	01/15/2007
Equipment ID:	0955-009-001	Critical:	L
Asset ID:	0000110991	Reference Material:	
Work Order Nbr:		Incident Event ID:	
History Type:	FXD	Inspection Date:	02/26/2007
Asset Type:	221	Inspection Type:	
Cost Center:	K.DCRR100281		
Unit:	0955 - 4 CRUDE UNIT PLT 11		
Headline:	Fire Damage Assessment/No damaged detected or repairs required		

Reliability Analysis:

Event Type:	Inspection	Worked Performed By:	Chevron Maintenance
Cause Category:	Information	Program Status:	
Effect Category:	Information	Maintainable Item:	Pipe Wall
Repair Location:		Permanent Repair WO:	
Temporary Repair:		Name:	DANM
Save:		Inspected By:	DANM

Findings:

PCA ID:
Inspectable:
Sub Item:
Part:
Discussion:

Condition:
Action:
Location:
Damage Mechanism:
PCA Work Order No :

Reliability Comments:

On 1/15/07, the # 4 Crude Unit was in the process of plant clean-up for the planned 1Qtr/07 major T/A. Well after feed was removed and approximately 6 hours into the cleanup, the wash oil piping failed where it ties into the P-1165A discharge spool. The leak immediately flashed and impinged on the East/West overhead pipeway between pipe supports 11J-18.5 and 11J-20.5. The fire also impinged on the tubes of the E-1100 A cells causing structural damage, tube failures and a secondary fire. Once the fire was controlled, the fire continued to burn for approximately 8 hours.

A fire damage assessment team determined the fire zones in accordance the API and MTI guidelines. In general, fire zones 5/6 (800 degF plus) were discovered in a 25 foot circumference surrounding the P-1165A. Fire Zone #4 (400-800 degF) extended approximately 10' beyond zone 5/6. Fire Zone #3 (150-400 degF) extended approximately 20' beyond Fire Zone #4. Fire Zone 2 was the area affected by firewater and pump deluge systems. Fire Zone #1 indicated no damage. Structure, electrical, instrumentation and machinery damage were covered by the representatives from the specific disciplines.

This line was located in fire zone 2-3. Inspection consisted of the following:

1. Visual inspection of the line in the overhead pipeway to the P-1105's. The line was found to be in good condition with no damaged noted or repairs required. The inspection was performed by Myron Makowsky of IESCO.



History Brief

For Location ID: 0955-009-001 in Unit: 0955

Report Date: August 15, 2012

Data Source: Meridium

Brief Data:

Date Not Available:	1/6/2005	Date Available:	
History Brief Date:	01/11/2005	History Brief ID:	EI-0501118216
Event Type:	Inspection	In- Service Date:	
Equipment ID:	0955-009-001	Critical:	L
Asset ID:	0000110991	Reference Material:	
Work Order Nbr:		Incident Event ID:	
History Type:	FXD	Inspection Date:	01/06/2005
Asset Type:	221	Inspection Type:	EVI
Cost Center:	K.DCRR100281		
Unit:	0955 - 4 CRUDE UNIT PLT 11		
Headline:	5 Year VT/CUI Insp		

Reliability Analysis:

Event Type:	Inspection	Worked Performed By:	Chevron - General
Cause Category:	Compliance, Inspection, PM	Program Status:	
Effect Category:	No Effect	Maintainable Item:	General
Repair Location:		Permanent Repair WO:	
Temporary Repair:		Name:	JMJG
Save:		Inspected By:	

Reliability Comments:

Not insulated at 1st ell past column skirt; concrete pad underneath P-1105A inlet line pedestal starting to deteriorate.



History Brief

For Location ID: 0955-009-001 in Unit: 0955

Report Date: August 15, 2012

Data Source: Meridium

Brief Data:

Date Not Available:	1/2/1998	Date Available:	
History Brief Date:	07/08/2002	History Brief ID:	HB-0207073752
Event Type:	Information	In- Service Date:	
Equipment ID:	0955-009-001	Critical:	L
Asset ID:	0000110991	Reference Material:	
Work Order Nbr:		Incident Event ID:	
History Type:	FXD	Inspection Date:	
Asset Type:	221	Inspection Type:	
Cost Center:	K.DCRR100281		
Unit:	0955 - 4 CRUDE UNIT PLT 11		
Headline:	PMI		

Reliability Analysis:

Event Type:	Information	Worked Performed By:	Chevron Maintenance
Cause Category:	Information	Program Status:	
Effect Category:	Information	Maintainable Item:	Pipe Wall
Repair Location:		Permanent Repair WO:	
Temporary Repair:		Name:	UNK
Save:		Inspected By:	

Findings:

<u>PCA ID:</u>	<u>Condition:</u>
<u>Inspectable:</u>	<u>Action:</u>
<u>Sub Item:</u>	<u>Location:</u>
<u>Part:</u>	<u>Damage Mechanism:</u>
<u>Discussion:</u>	<u>PCA Work Order No.:</u>

Reliability Comments:

MATERIAL ANALYSIS ON THE FIVE CHROME PIPING SYSTEM REVEALED C/S VALVES AND VALVE BONNETS AT LOCATIONS 37A, 37B, 64A, AND 64B. FOUR LOCATIONS AT POINTS 5C, 43C, 43D, AND 43E COULD NOT BE EXAMINED DUE TO OBSTRUCTIONS.



History Brief

For Location ID: 0955-009-001 in Unit: 0955

Report Date: August 15, 2012

Data Source: Meridium

Brief Data:

Date Not Available:	1/1/1998	Date Available:	
History Brief Date:	10/24/2002	History Brief ID:	HB-0210080762
Event Type:	Information	In- Service Date:	
Equipment ID:	0955-009-001	Critical:	L
Asset ID:	0000110991	Reference Material:	
Work Order Nbr:		Incident Event ID:	
History Type:	FXD	Inspection Date:	
Asset Type:	221	Inspection Type:	
Cost Center:	K.DCRRI00281		
Unit:	0955 - 4 CRUDE UNIT PLT 11		
Headline:	January 1998 Shut Down New Valves and elbows.....future EBV's		

Reliability Analysis:

Event Type:	Information	Worked Performed By:	Chevron Maintenance
Cause Category:	Information	Program Status:	
Effect Category:	Information	Maintainable Item:	Elbow
Repair Location:		Permanent Repair WO:	
Temporary Repair:		Name:	UNK
Save:		Inspected By:	

Findings:

<u>PCA ID:</u>	<u>Condition:</u>
<u>Inspectable:</u>	<u>Action:</u>
<u>Sub Item:</u>	<u>Location:</u>
<u>Part:</u>	<u>Damage Mechanism:</u>
<u>Discussion:</u>	<u>PCA Work Order No.:</u>

Reliability Comments:

221 - Process Piping Worklist



Report Date: August 15, 2012

Data Source: Meridium

IDENTIFICATION

Worklist ID: WL-1011238180

Equip. Location: 0955-009-001: C-1100 OUTLET- BOTTOMS TO P-1105/A Asset ID: 0000110991

Unit: 0955: 4 CRUDE UNIT PLT 11

Activity ID: 2011 D&R Major S/D

Date Created: 05/03/2010

Date Modified: 11/16/2010

MFR:

MFR Model No:

MFR Serial No:

Asset Type: 221 - 221 - Process Piping

GENERAL

<input type="checkbox"/>	Available During Run?	
<input type="checkbox"/>	Bill of Material	
<input checked="" type="checkbox"/>	Staging Required	
Comments:		

WORKLIST ITEMS

Denied
Signature

<input type="checkbox"/>	Clean Internally		
<input type="checkbox"/>	Repair Gasket Surface		
<input type="checkbox"/>	Hydrotest		
<input type="checkbox"/>	Hanger		
<input type="checkbox"/>	Shoes		
<input type="checkbox"/>	Bolting		
<input type="checkbox"/>	Dead Leg		
<input type="checkbox"/>	Supports		
<input type="checkbox"/>	Insulation		
<input type="checkbox"/>	Coating		

<input checked="" type="checkbox"/>	Additional Instruction	hot piping inspection	
<input type="checkbox"/>	Additional Instruction		
<input type="checkbox"/>	Additional Instruction		
<input type="checkbox"/>	Additional Instruction		
Note:			
History:			
Hot piping inspection can not be performed safely on the run due to special equipment and personel required.			